

FIG. 1

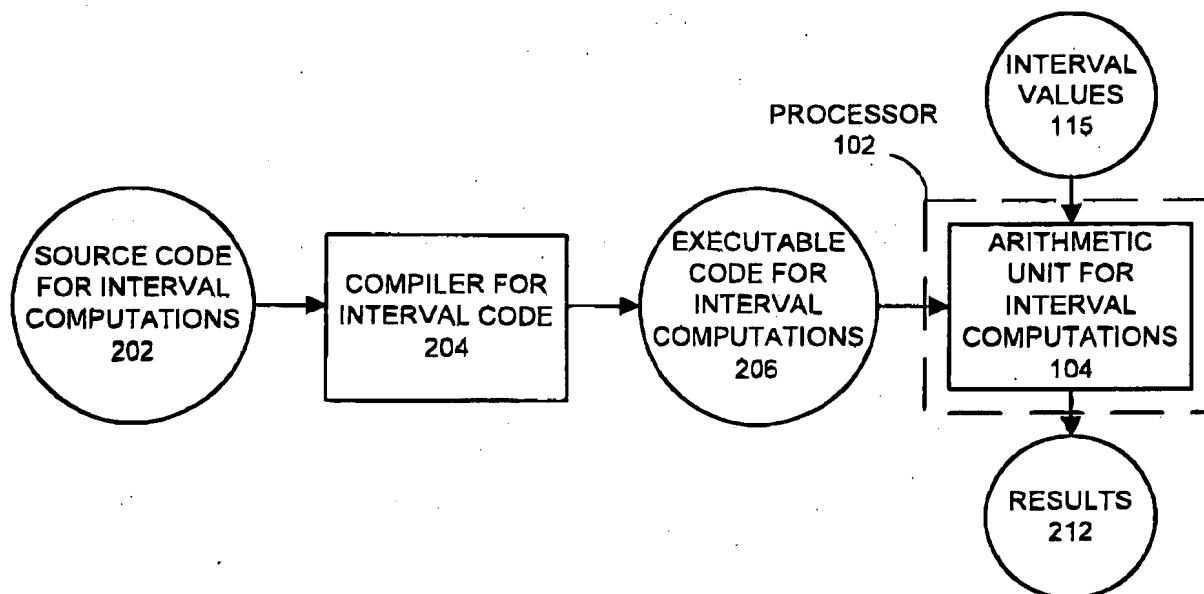


FIG. 2

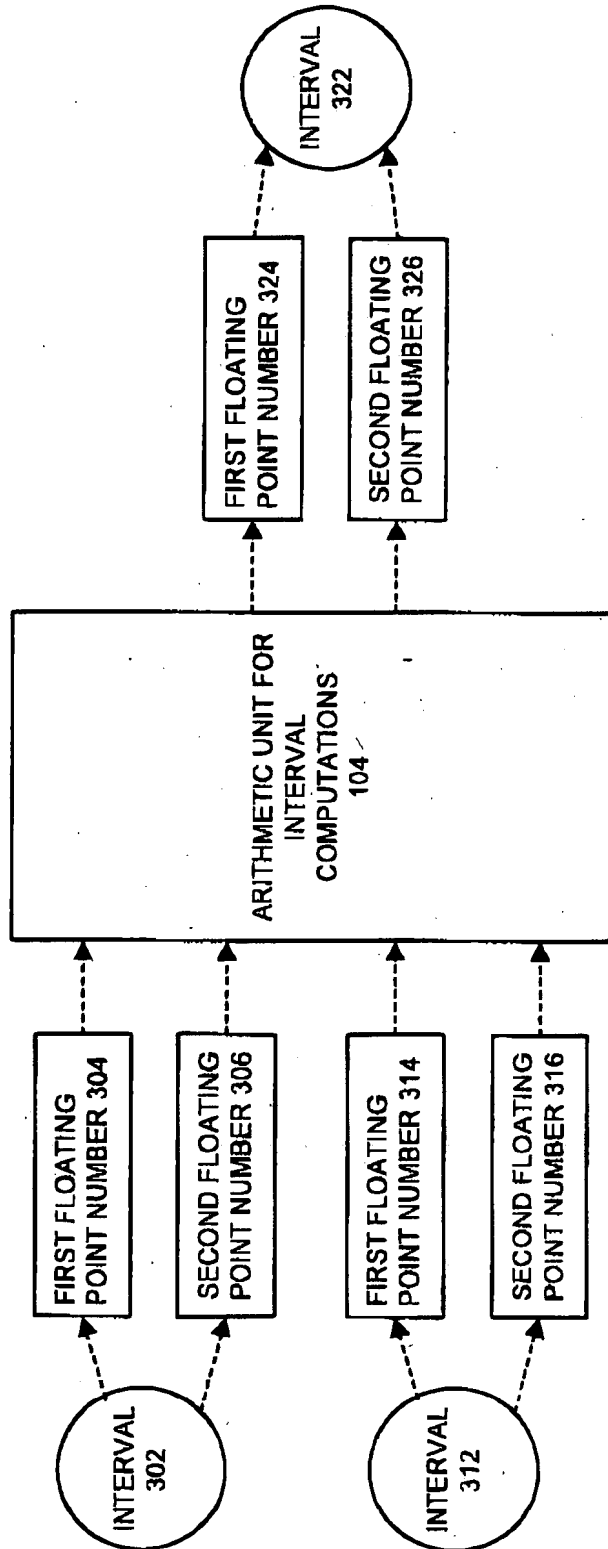


FIG. 3

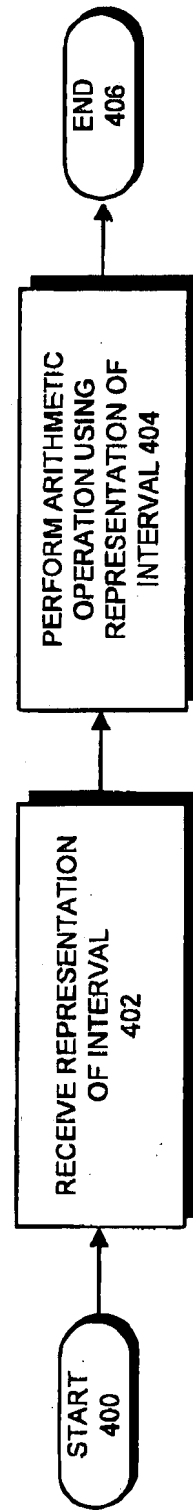


FIG. 4

$$X = [\underline{x}, \bar{x}] \equiv \{x \in \mathfrak{R}^* | \underline{x} \leq x \leq \bar{x}\}$$

$$Y = [\underline{y}, \bar{y}] \equiv \{y \in \mathfrak{R}^* | \underline{y} \leq y \leq \bar{y}\}$$

$$(1) X + Y = [\downarrow \underline{x} + \underline{y}, \uparrow \bar{x} + \bar{y}]$$

$$(2) X - Y = [\downarrow \underline{x} - \bar{y}, \uparrow \bar{x} - \underline{y}]$$

$$(3) X \times Y = [\min(\downarrow \underline{x} \times \underline{y}, \underline{x} \times \bar{y}, \bar{x} \times \underline{y}, \bar{x} \times \bar{y}), \max(\uparrow \underline{x} \times \underline{y}, \underline{x} \times \bar{y}, \bar{x} \times \underline{y}, \bar{x} \times \bar{y})]$$

$$(4) X/Y = [\min(\downarrow \underline{x}/\underline{y}, \underline{x}/\bar{y}, \bar{x}/\underline{y}, \bar{x}/\bar{y}), \max(\uparrow \underline{x}/\underline{y}, \underline{x}/\bar{y}, \bar{x}/\underline{y}, \bar{x}/\bar{y})], \text{ if } 0 \notin Y$$

$$X/Y \subseteq \mathfrak{R}^*, \text{ if } 0 \in Y$$

FIG. 5

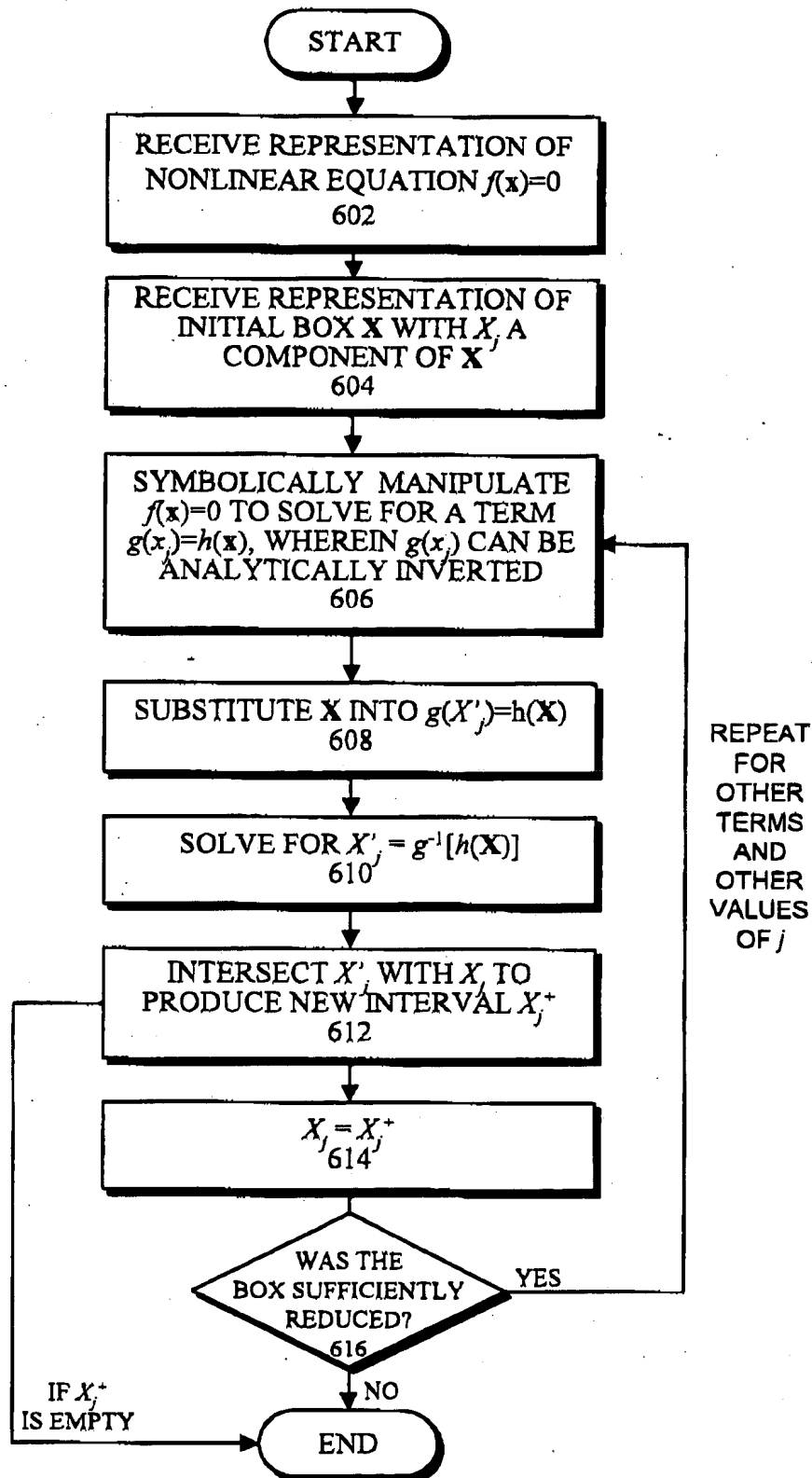


FIG. 6

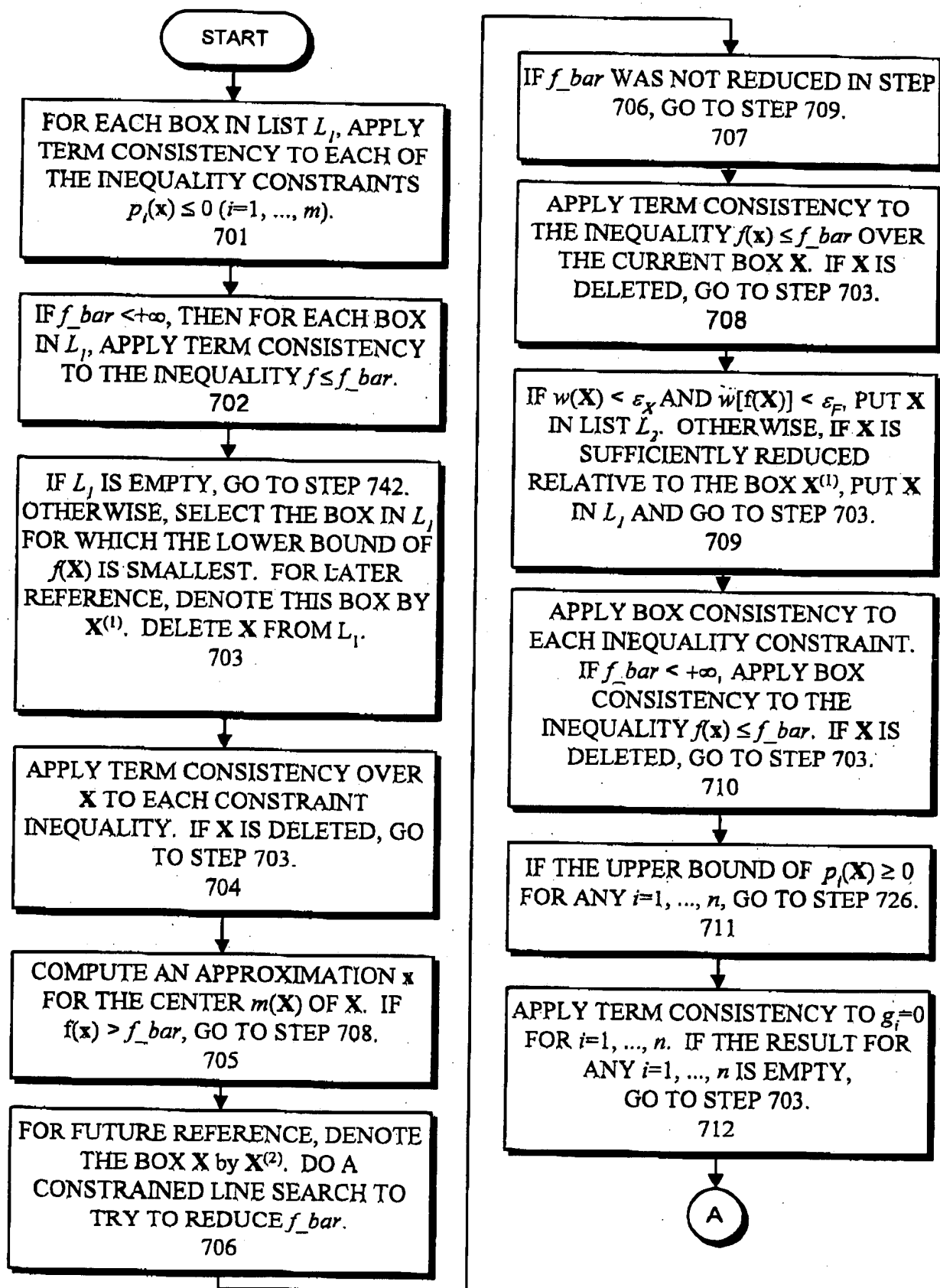


FIG. 7A

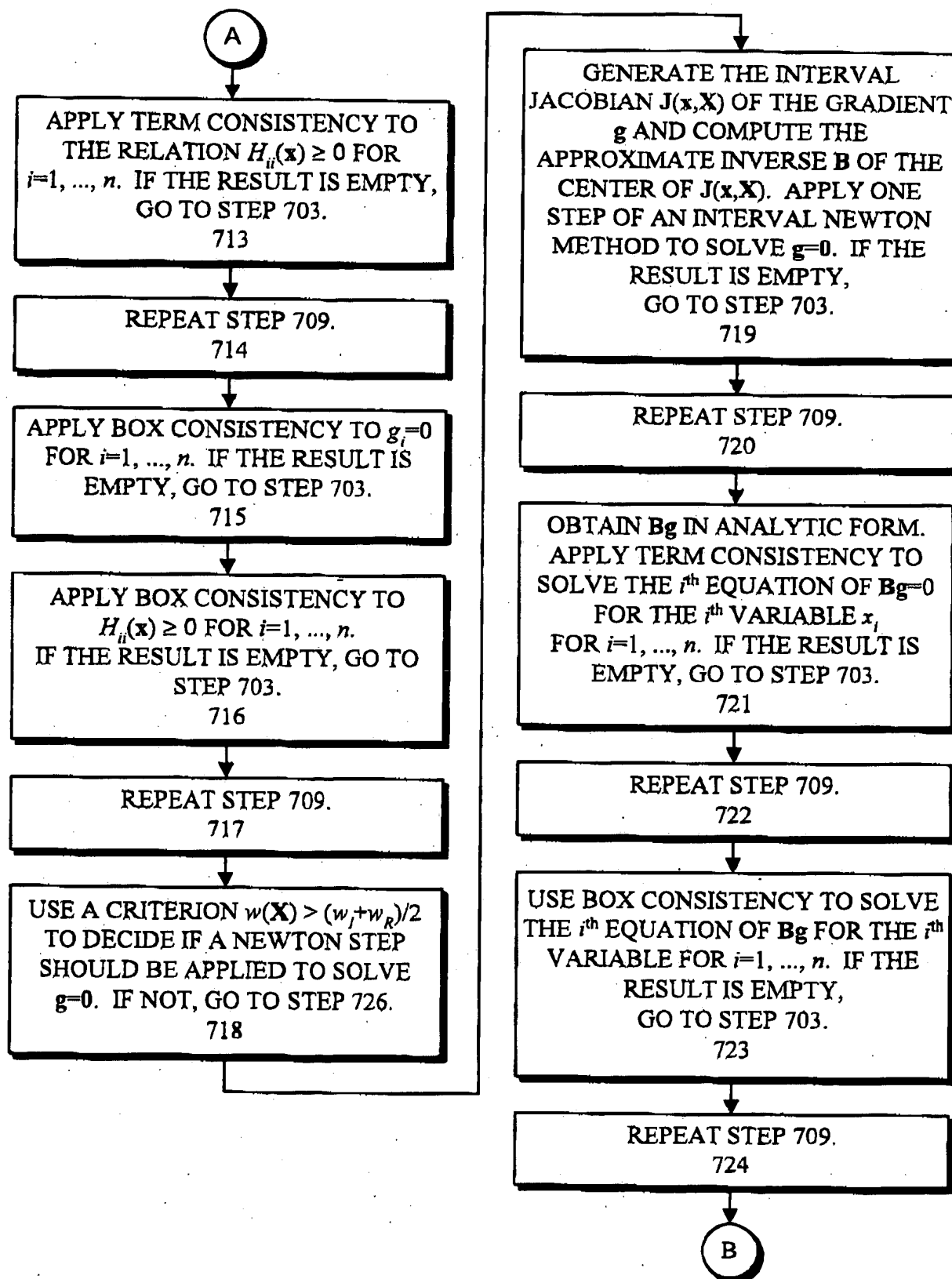
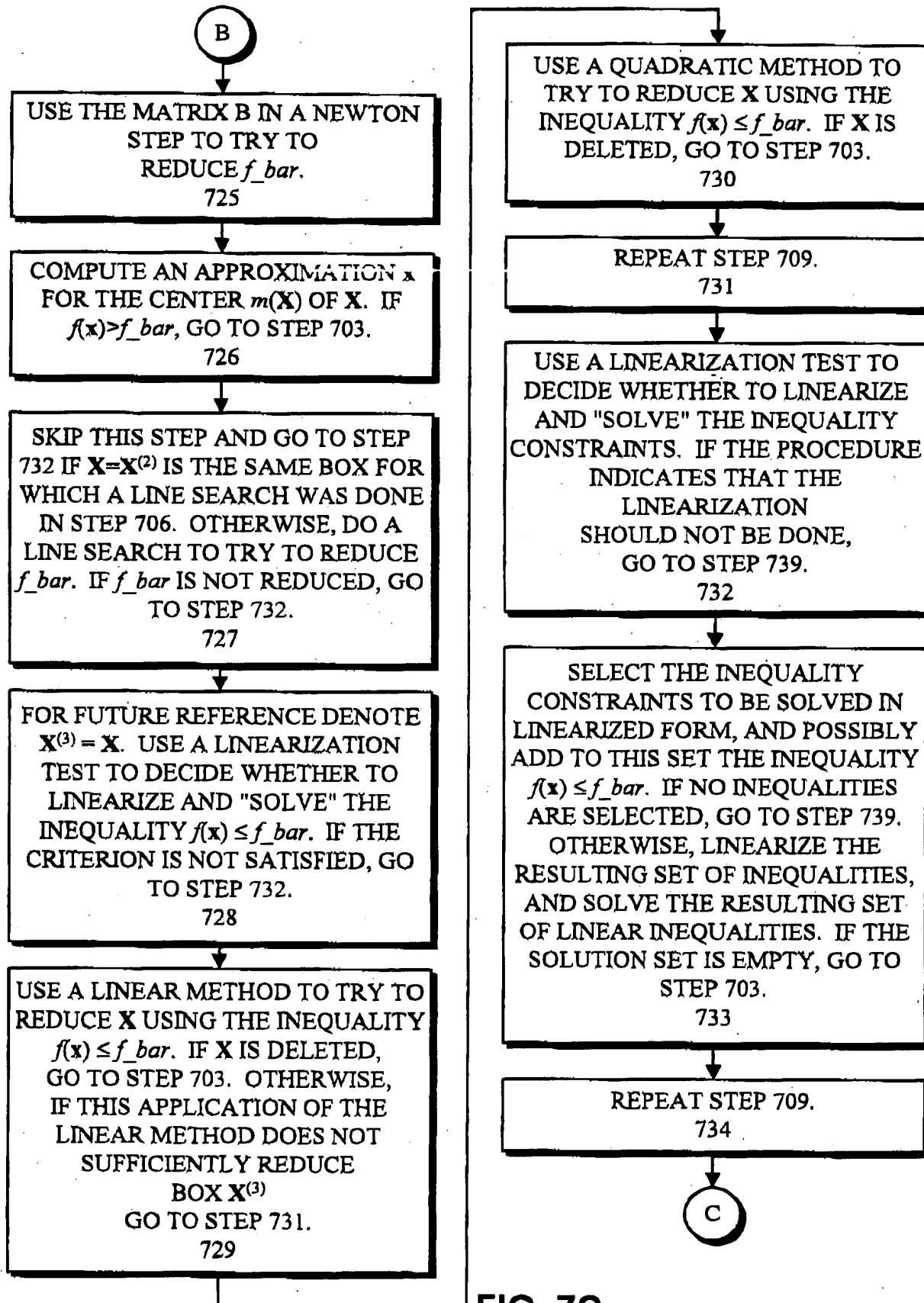


FIG. 7B



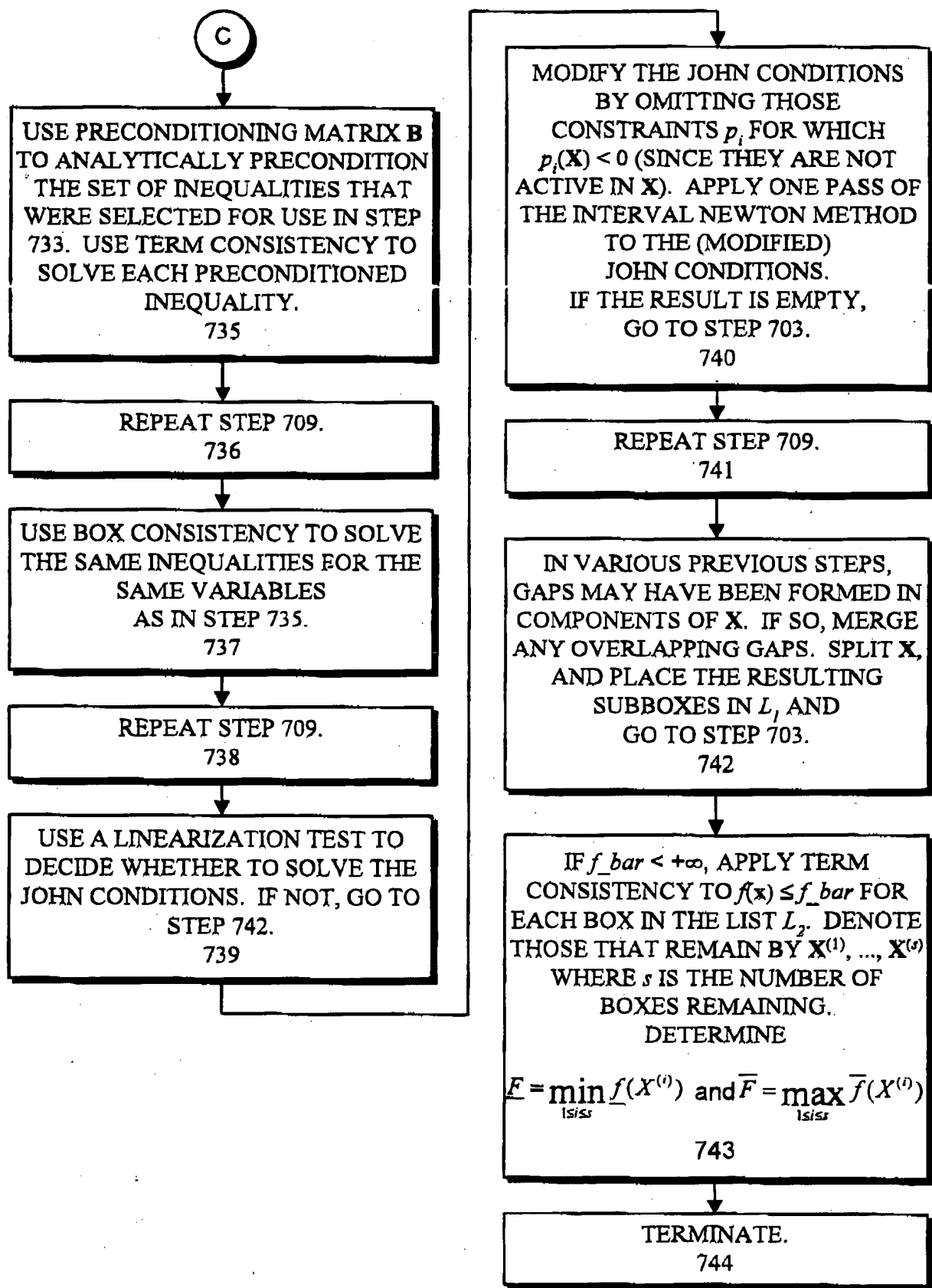


FIG. 7D